

Title (en)  
TURBULENT/FAST FLUIDIZED BED REACTOR WITH BAFFLES TO MAXIMIZE LIGHT OLEFIN YIELDS

Title (de)  
TURBULENTER/SCHNELLER WIRBELSCHICHTREAKTOR MIT ABLENKPLATTEN ZUR MAXIMIERUNG DER AUSBEUTE LEICHTER OLEFINE

Title (fr)  
RÉACTEUR À LIT FLUIDISÉ TURBULENT/RAPIDE DOTÉ DE CHICANES PERMETTANT DE MAXIMISER LES RENDEMENTS EN OLÉFINES LÉGÈRES

Publication  
**EP 3990581 A1 20220504 (EN)**

Application  
**EP 20753445 A 20200730**

Priority  
• US 201962883072 P 20190805  
• IB 2020057228 W 20200730

Abstract (en)  
[origin: WO2021024119A1] Systems and methods for producing light olefins wherein a feed stream comprising naphtha is flowed into a reaction unit comprising a fast fluidized bed reactor coupled to and in fluid communication with a riser reactor. The fast fluidized bed reactor comprises baffles therein to minimize backmixing therein to maximize the production of light olefins. The effluent from the fast fluidized bed reactor is further flowed to the riser reactor. The lift gas, which can comprise nitrogen, methane, flue gas, or combinations thereof, is injected in the reaction unit via a sparger. Effluent of the riser reactor is separated in a product separation unit to produce a product stream comprising light olefins and spent catalyst. Spent catalyst is further stripped by a stripping gas comprising methane, nitrogen, flue gas, or combinations thereof. Stripped spent catalyst is regenerated to produce regenerated catalyst, which is subsequently flowed to the fast fluidized bed reactor.

IPC 8 full level  
**C10G 11/18** (2006.01); **B01J 8/18** (2006.01); **B01J 8/38** (2006.01)

CPC (source: EP US)  
**B01J 8/0055** (2013.01 - US); **B01J 8/1845** (2013.01 - US); **B01J 8/1872** (2013.01 - EP); **B01J 8/26** (2013.01 - US); **B01J 8/388** (2013.01 - EP US); **B01J 29/06** (2013.01 - US); **C10G 11/18** (2013.01 - EP US); **B01J 2208/00017** (2013.01 - EP US); **B01J 2208/00539** (2013.01 - US); **B01J 2208/00557** (2013.01 - EP US); **B01J 2208/0084** (2013.01 - EP US); **B01J 2208/00911** (2013.01 - EP US); **C10G 2300/1044** (2013.01 - EP US); **C10G 2400/20** (2013.01 - EP US); **C10G 2400/30** (2013.01 - EP); **Y02P 30/40** (2015.11 - EP)

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**WO 2021024119 A1 20210211**; CN 114286720 A 20220405; CN 114286720 B 20231107; EP 3990581 A1 20220504; US 12012555 B2 20240618; US 2022235281 A1 20220728

DOCDB simple family (application)  
**IB 2020057228 W 20200730**; CN 202080061003 A 20200730; EP 20753445 A 20200730; US 202017626761 A 20200730